

BERING SEA - ALEUTIAN ISLANDS AREA STATE-WATERS GROUND FISH
FISHERIES AND GROUND FISH HARVEST FROM PARALLEL SEASONS IN 2002



By

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ABSTRACT

The Alaska Department of Fish and Game manages fisheries for sablefish *Anoplopoma fimbria* and black rockfish *Sebastes melanops* in state waters of the Aleutian Islands. State waters include all waters within three nautical miles of shore. This report summarizes harvest and management of these fisheries since their inception, 1995 for sablefish and 1994 for black rockfish, through the 2002 season.

The Alaska Board of Fisheries created vessel length and gear restriction zones in state waters of the central Aleutian Islands. These regulations are summarized and their effects are discussed.

For all other state-waters groundfish fisheries in the Bering Sea-Aleutian Islands Area, the state adopts the seasons, bycatch limits and allowable gear types in the adjacent Exclusive Economic Zone (EEZ) and promulgated by the National Marine Fisheries Service (NMFS), except where the Board of Fisheries regulations take precedent. ADF&G issues an emergency order (EO) on an annual basis to establish the commercial groundfish seasons, bycatch limits and gear types in state waters for those fisheries not actively managed by the State of Alaska to coincide with federal regulations in waters of the adjacent EEZ, 3 to 200 nautical miles offshore. This report summarizes the harvest of groundfish from state waters of the Bering Sea – Aleutian Islands Area in those parallel fisheries from 1995 to 2002.

INTRODUCTION

The Alaska Department of Fish and Game (ADF&G) actively manages three groundfish fisheries in the state waters of the Bering Sea – Aleutian Islands (BSAI) Area (Figure 1) and the Western District of the South Alaska Peninsula Area. Those fisheries are sablefish *Anoplopoma fimbria*, black rockfish *Sebastes melanops*, and Pacific cod *Gadus macrocephalus*. Waters under the jurisdiction of the State of Alaska are from the shore to 3 nautical miles offshore, however ADF&G has full management authority for black rockfish in the Gulf of Alaska (from 0-200 nautical miles). This report describes the sablefish fishery from 1995 through 2002 and the black rockfish fishery from 1994 through 2002. A separate ADF&G Regional Informational Report (Ruccio *et al.* in press) covers the state-waters Pacific cod fishery that occurs in the Western District of the South Alaska Peninsula Area.

The Alaska Board of Fisheries (BOF), in March 2000, established vessel length and gear restrictions for vessels fishing Pacific cod and rockfish in state waters of the central Aleutian Islands between 175°30' and 177° W long. This report summarizes those regulations, which became effective in July 2000, and the initial effects of those regulations.

Parallel groundfish fisheries occur in state waters and correspond to the season, gear and bycatch limits of the federal season in adjacent federal waters unless superceded by other Board of Fisheries regulation. Parallel groundfish fishing occurs throughout the Bering Sea – Aleutian Islands Area. This report summarizes the harvest from state waters in those fisheries from 1995 through 2002.

Groundfish harvests in this report are based on the ADF&G fish ticket database and the fish ticket software program *Neptune* as of May 2003, and reflects the most recent additions and corrections to that database. The statistical area surrounding Bobrof Island in the central Aleutian Islands contained both state and federal waters until 2000. Sablefish harvest from this area was considered as state-water harvest unless verified as from federal waters by interview of the vessel captain or by logbook examination. In 2001, statistical areas were revised, and the territorial waters surrounding Bobrof Island are now entirely state statistical areas.

ALEUTIAN ISLANDS STATE-WATERS SABLEFISH FISHERY

Historic Background

In 1995, NMFS implemented an individual fishing quota (IFQ) system for the harvest of sablefish. The Alaska Department of Law advised that the harvest of sablefish in the state waters of Alaska could not be limited to only IFQ permit holders, therefore any holder of a valid Commercial Fisheries Entry Commission (CFEC) interim use permit for statewide sablefish could participate. A fishery for sablefish was established in state waters of Alaska where the historical harvest of this species was of sufficient quantity to allow for a manageable fishery. The Aleutian Islands state-waters sablefish fishery includes all state waters of the Aleutian Islands south of the latitude of Cape Sarichef (54°36' N lat.), and west of the longitude of Scotch Cap Light (164°44' W long.), (Figure 2).

ADF&G originally established March 15 as the opening date and November 15 as the closing date for this fishery, unless the guideline harvest level (GHL) was obtained and the fishery was closed earlier by an emergency order (EO). The opening and closing dates were chosen to run concurrent with the federal IFQ sablefish fishery. In 2001 the Alaska Board of Fisheries changed the season opening for sablefish fishing in the state-waters fishery to May 15. Historically most fishing occurred in late spring and summer. The later season was requested by the public to provide small vessel operators an opportunity to take advantage of potentially better weather conditions. The GHL was set according to recent state-waters harvest history, thus the 1995 season opened with a GHL of 400,000 pounds¹. From 1995 to 2000, all legal groundfish gear types could be used to harvest sablefish in state waters. Effective 2001, longline, pot, jig, and hand troll became the only legal gear types. Registration for the sablefish fishery was similar to other groundfish fisheries, except vessels were registered for only that fishery.

ADF&G does not conduct stock assessment of sablefish, but relies on NMFS longline surveys to partially base the GHL upon. NMFS surveys in 1995 and 1996 showed sablefish stock reductions in the federal Bering Sea, Aleutian Islands, and Western Gulf of Alaska Sablefish Regulatory Areas, therefore lower state-waters GHLs were established for the 1996 and 1997 state-waters fisheries. In 1998 the total allowable catch (TAC) for the federal Bering Sea and Aleutian Islands Sablefish Regulatory Areas increased by 16.5 percent (Table 1). However, the department did not increase the quota in state waters in order to help mitigate the over harvest, which occurred during the previous two seasons primarily by IFQ vessels. The federal TAC increased slightly in 1999; however, due to poor fishery performance during the previous year, ADF&G decreased the GHL by seven percent. Based on recent fishery performance, historic fishery harvest, and the federal TAC, the GHL for the 2000 fishery was set at 400,000 pounds, an increase of 60% over the 1999 fishery. This trend continued with a GHL for the 2001 fishery set at 425,000 pounds, an increase of 6% over the 2000 fishery.

Since the 1995 fishery, most of the harvest has occurred west of 170° W long. Problems with killer whale (*Orcinus orca*) predation on the fishers' catch east of 170° W. long., and the establishment of a new processor on Adak Island in 1999 may help to explain the general shift in effort to western areas.

The Aleutian Islands state-waters fishery is open to all fishers with a valid CFEC interim use permit for statewide sablefish. There has been a misconception by some CDQ and IFQ fishers who believe the federal permit allows them to fish in state waters without registration and regardless of closures of state waters. Documentation of all violations has been provided to the Department of Public Safety, Division of Fish and Wildlife Protection for further action. ADF&G and NMFS have continued to increase efforts to educate the fishing fleet about state registration requirements.

2002 Fishery

ADF&G issued a news release on February 15 announcing a GHL of 460,000 pounds (Table 1). This GHL represents an 8% increase over the 2001 fishery and was based on recent fishery performance, historic fishery harvest and the federal TAC. Harvest of sablefish in state waters

¹ All weights refer to whole pounds.

since 1990 has averaged approximately 5% of the TAC established by the NMFS survey for the Eastern Bering Sea and Aleutian Islands Sablefish Regulatory Areas. Accordingly, the GHF for 2002 could have been 493,000 pounds; however, the department established a lower GHF due to a history of continued harvest from state waters after the fishery has closed.

The fishery opened May 15, and was managed primarily by reviewing weekly processor catch reports and fish tickets, monitoring the average size of each delivery and by plotting logbook data to verify harvest location. Fishing effort began in May and deliveries occurred within a week of the opening. The cumulative harvest reached approximately 141,000 pounds by the end of May; 338,000 pounds through June, and by July 12 the estimated cumulative harvest was 420,613 pounds. An announcement was made that afternoon to close the fishery at noon, on July 16. During the 2002 fishery, 17 vessels landed 463,443 pounds of sablefish from state waters. Nine vessels illegally landed 14,527 pounds of sablefish in state waters following closure of the fishery. Longline gear accounted for 456,632 pounds (95%) of the total harvest, pot gear accounted for 20,212 pounds (4%), and 1,126 pounds (less than 1%) was landed as bycatch by a trawl vessel (Table 2). Three catcher processors (CPs) registered for the fishery; however only one made a landing in state waters. Of the 29 vessels registered for the fishery, 13 never fished state waters. Eighteen non-quota vessels (two of which were unregistered) made 51 landings of state-waters sablefish, delivering 454,012 pounds, or 95% of the harvest (Table 3). Six quota vessels made 8 landings totaling 23,958 pounds, or 5% of the harvest.

The average exvessel price for the 2002 fishery was \$2.95 per pound (Table 4). The fishery value was approximately \$875,949, the highest on record.

Most of the fishery occurred in waters west of 175° W long., which is consistent with previous years (Figure 3). Despite having the highest recorded state-waters GHF, the 2002 fishery lasted only 63 days, the shortest since the fishery started in 1995.

The Aleutian Islands state-waters sablefish fishery started in 1995. Harvest in the state-managed fishery was 269,000 pounds during the first year, and has ranged from a low of 255,000 pounds in 1998 to a high of 478,000 pounds in 2002 (Table 1). During the previous seven years over 250 vessels have harvested over 2.9 million pounds, for an exvessel fishery value of over \$5.2 million. In the Aleutian Islands sablefish fishery through 2002, non-quota fishers accounted for 42% of the fleet, 61% of the deliveries and 64% of the harvest.

Status of Stock

NMFS has conducted annual longline surveys covering portions of the Aleutian Islands sablefish fishery area since 1978. Initially, the survey was a cooperative effort with Japan and covered the Gulf of Alaska. The survey was expanded to include the Aleutian Islands in 1980 and the eastern Bering Sea in 1982.

In 1987, NMFS started an independent annual longline survey in the Gulf of Alaska. That survey was expanded to include biennial sampling of the eastern Aleutian Islands beginning in 1996 and the eastern Bering Sea beginning in 1997. The survey, which covers a portion of the state-waters fishery area, shows that relative to 1986 and 1987 sablefish abundance appears low, but slowly increasing (Sigler et al, 2002).

ALEUTIAN ISLANDS BLACK ROCKFISH FISHERY

Historic Background

ADF&G established a directed fishery for nearshore pelagic shelf rockfish in state waters of the eastern Aleutian Islands in December 1994. The pelagic shelf rockfish group includes black *Sebastes melanops*, blue *S. mystinus*, widow *S. entomelas*, yellowtail *S. flavidus* and dusky *S. ciliatus* rockfish. In the eastern Aleutian Islands, this group is represented by black and dusky rockfish due to the limited distribution of the other species.

This fishery was established in response to local public inquiries regarding the possibility of a state-managed black rockfish fishery. Under federal management black and other pelagic shelf rockfish were included in the “other rockfish” assemblage. This assemblage includes all rockfish species in the Bering Sea and Aleutian Islands except shortraker *S. borealis*, rougheye *S. aleutianus*, sharpchin *S. zacentrus*, northern *S. polypinus* rockfish and Pacific ocean perch *S. alutus*.

Directed fisheries in both state and federal waters for the “other rockfish” assemblage occurred prior to 1994, but were of progressively shorter duration. The fisheries were open to all gear types; however, they were managed as trawl fisheries since the harvest was predominantly by trawl vessels. Black and other pelagic shelf rockfish had become available to the local fleet primarily as bycatch in jig and longline fisheries for other groundfish.

In 1994 the “other rockfish” assemblage was managed as bycatch-only by NMFS; through November only 43% of the allowable catch of this assemblage had been taken. According to ADF&G fish ticket data, approximately 4% of that harvest was pelagic shelf rockfish, of which less than 1% was black rockfish. ADF&G, with notification to NMFS and the North Pacific Fishery Management Council (NPFMC), assumed management authority of nearshore pelagic shelf rockfish for a state-water fishery by EO on December 21, 1994.

Registration for the black rockfish fishery was similar to other groundfish fisheries, except vessels were registered for only one month at a time. The short duration of the registration was to allow ADF&G greater control of the fishery and to be able to track actual participation each month. All legal groundfish gear types, except seines, were allowed by regulation (pots, trawls, longlines, mechanical jigging machines, hand troll, and dinglebar troll gear). However, handlines and mechanical jigging machines were stipulated, by permit, as the only legal gear types for this fishery. These gear types have a low harvest potential that would not threaten to exceed the federal TAC for the other rockfish category.

In 1994, ADF&G established two areas of harvest in the eastern Aleutian Islands: the state waters around Unalaska, Sedanka and Unalga Islands, and the state waters around Akutan and Akun Islands (Figure 4). A GHL of 100,000 pounds was established for this fishery, with 50,000 pounds from each area (Tables 5 & 6). This harvest level was deemed sufficient to provide an economically viable fishery, yet conservative enough to prevent overharvest. A conservative management policy for these slow-growing, long-lived, and non-migratory species was considered necessary to prevent overexploitation.

The nearshore rockfish fishery changed with the 1998 season when the area was expanded to include all state waters of the Aleutian Islands south of Cape Sarichef and west of Scotch Cap Light, and all federal waters of the Pacific Ocean between Scotch Cap Light and 170° W long. (Figure 5). As the management area expanded, ADF&G established a new area of harvest; state waters west of 168° W long. The new area was established in response to public interest in a rockfish fishery in the vicinity of Atka Island. GHLS were established which provided 40,000 pounds for both the Akutan and Unalaska sections, and 20,000 pounds for the area west of 168° W long. At this time ADF&G also assumed management responsibility for black and blue rockfish in the waters of the EEZ in the Gulf of Alaska as the NPFMC passed Amendment 46 to the Groundfish Fishery Management Plan, delegating management to the state of Alaska. Black and blue rockfish are shallow water, nearshore pelagic shelf species that were not well assessed by federal surveys and not well addressed by existing federal management practices. This action limited the directed harvest to black rockfish in the Aleutian Islands since blue rockfish have a limited distribution in Alaska and do not occur in the Aleutian Islands. NMFS retained management authority over other species of pelagic shelf rockfish (widow, yellowtail, and dusky rockfish) in federal waters. This group is fully utilized in the federal fisheries; therefore, dusky rockfish could now only be harvested incidentally in the Aleutian Islands rockfish fishery.

The 1994 fishery opened at noon on December 21; only one vessel registered for the fishery. No harvest of pelagic shelf rockfish occurred in 1994 subsequent to the establishment of the directed fishery. In 1995, all harvest was incidental to the Pacific cod jig fishery. Fishing effort was minimal and sporadic throughout 1995. In 1996, landings increased in the Unalaska, Sedanka, and Unalga Islands Area. The principle area of harvest was from the waters just north of Unalaska Island. The primary species of harvest was black rockfish, although dusky rockfish was also harvested. No effort was reported from the Akutan and Akun Islands Area in 1996 (Table 6).

Fishing effort, in terms of number of landings and amount harvested, increased during 1997, but the number of participating vessels decreased. The majority of effort took place along the outer coast of Akutan Island and along the southern Unalaska coast. Both black and dusky rockfish were landed. Logbook data submitted by one operator showed that dusky rockfish made up 28% of their harvest, however fish ticket data reflected that dusky rockfish made up a small percentage of the total rockfish landings. Area processors were notified of the possible misidentification and asked to provide positive identification of rockfish purchased. In addition, ADF&G provided identification information to personnel at those area processors.

The nature of the fishery changed in 1998. The fishery was dominated by short day trips and small deliveries. The average delivery in 1998 was lower compared to previous years, the average vessel length of participating vessels decreased from 36 feet to 23 feet, and the average trip length was less than one day in 1998 compared to approximately two days in prior years. All fishing effort occurred in the Akutan area.

ADF&G reduced the 1999 GHL from 40,000 pounds to 35,000 pounds in the Akutan and Unalaska Sections (Table 6). This reduction was due to departmental concerns of possible localized depletion of the black rockfish stock around Akutan Island and the eastern part of Unalaska Island. The GHL for the Western Section remained at 20,000 pounds. Since 1995, approximately 60% of the black rockfish harvested came from two statistical areas, one just south of Akutan Island and the other off the outer coast of Sedanka Island. Fishers were

encouraged at that time to spread out their effort from previously fished areas to lessen the impact on those local populations. In the three years of harvest from the Akutan Section, 61% has come from the area just south of Akutan Island. In 1999, 62% of the harvest came from just south of Akutan Island, and most of it was from the waters between Talus Point and Green Bight. In 2000, this area was closed to the retention of black rockfish due to concerns of localized depletion in that area. In 2000, the Akutan and Unalaska Sections were divided into subsections, each with a separate GHL to disperse fishing effort (Table 7). These GHs were based on potential black rockfish habitat as determined by the amount of coastline.

Total harvest since 1995 is approximately 218,000 pounds. Most of that harvest came from the area just south of Akutan Island and from the outside waters of Sedanka Island (Figure 4). The average yearly value of the fishery over the last five years is in excess of \$6,000. The fishery area expanded in 1998 to include all state waters of the Aleutian Islands west of Unalaska Island and federal waters of the Gulf of Alaska between 164°44' and 170° W long. The GHL was reduced by 10,000 pounds in 1999 due to concerns of local depletion, and in 2000, the Akutan and Unalaska Sections were divided into several subsections in an attempt to disperse fishing effort.

2002 Fishery

ADF&G announced the 2002 GHL by news release on March 1, with 35,000 pounds available in each, the Akutan and Unalaska Sections and 20,000 pounds available in the Western Section, the same as in 2000 and 2001. The waters from the south end of Green Bight to Talus Point remained closed for the 2002 fishery.

The 2002 fishery was primarily managed by reviewing weekly processor reports and fish tickets, plotting logbook data and maintaining contact with processors. Fifteen vessels registered for the 2002 fishery, an increase of 60% over the 2001 fishery. Landings occurred May through August; however, all harvest is confidential since less than three processors received deliveries. Participation in the black rockfish fishery was primarily directed toward that species; the remainder was incidental to Pacific cod fishing. Most of the harvest came from the Akutan Section. All harvest was landed with jig gear.

The Unalaska Bay/Wislow Subsection closed to directed fishing for black rockfish by EO May 10 after the GHL was reached. The Rootok Island Subsection was closed August 15 after the GHL was reached for that subsection. The GHs of the remaining subsections were not attained during the 2002 fishery.

Status of Stock

Black rockfish have not been assessed by ADF&G in the Aleutian Islands. ADF&G established a dockside-sampling program in 1999. Information obtained through this program will provide ADF&G with basic biological data, which may provide information for future management decisions. Sampling efforts to obtain average length of black rockfish and average age through otolith analysis took place during 1997, 1999, 2000 and 2002 (Table 8). The groundfish port sampler position was vacant during 2001, therefore, sampling did not occur during that season.

Department personnel sampled 496 black rockfish in 2002; however, length-frequency and otolith data are not yet available.

ADAK VESSEL LENGTH AND GEAR RESTRICTION ZONES

In March of 2000, BOF established gear and vessel length restrictions for Pacific cod and rockfish fisheries in the central Aleutian Islands. The areas affected by these regulations are part of the nonexclusive BSAI Area. BOF defined two zones, each with different restrictions (Figure 6). Zone 1 includes state waters between Adak, Great Sitkin, and Tagalak Islands and waters adjacent to Adak Island in the Bay of Islands and between Boot Point and Cape Kagigikak. In this zone, a vessel longer than 60 feet in length overall may not be used to take Pacific cod or rockfish. This regulation is effective throughout the year. Legal gear types for targeting Pacific cod and rockfish within this area are pot, longline, mechanical jig, and hand troll, except when targeting black rockfish for which jig and handline are the only legal gear types.

Zone 2 encompasses all state waters between 175°30' and 177° W longitude inclusive of all waters defined in Zone 1. In this zone, a vessel longer than 60 feet in overall length may not be used to take Pacific cod from May 1 to September 15. Legal gear types within this area are also pot, longline, mechanical jig, and hand troll.

There are no restrictions on the amount of hand troll, longline, or pot gear. A maximum of five mechanical jig machines may be operated from a vessel. The vessel length and gear restrictions do not apply to fisheries for other species in these two zones.

ADF&G manages the black rockfish fishery in state waters; all vessels targeting this species must be registered with the department for this fishery. All other fisheries are managed as parallel fisheries, and vessels participating in those fisheries must be registered to fish in state waters of the Westward Region.

When the vessel size and gear restrictions around Adak were established, interest in the area was high, however, little fishing effort has occurred since their establishment and ADF&G did not have a mechanism in place to determine the exact participation in the fisheries affected by these regulations. ADF&G fish ticket data shows that ten vessels 60 feet and less harvested 16,010 pounds of Pacific cod, and four vessels harvested 3,988 pounds of rockfish from state waters in the Adak area in 2000 after July 5. New statistical areas became valid January 2001 allowing ADF&G to better track harvest in these zones. In 2001, sixteen vessels 60 feet or less harvested 1,270,102 pounds of Pacific cod, and six vessels harvested 5,476 pounds of rockfish. In 2002, eleven vessels 60 feet or less harvested 5,801,293 pounds of Pacific cod and three vessels harvested 3,397 pounds of rockfish (Table 9).

GROUND FISH HARVEST FROM PARALLEL SEASONS IN THE BERING SEA – ALEUTIAN ISLANDS AREA

ADF&G manages the sablefish and black rockfish fisheries in the state waters of the BSAI Area (Figure 1); all other groundfish fisheries that occur in state waters are parallel fisheries, where the state generally mirrors the openings and legal gear types of the federal seasons. However, legal gear types in the “Adak Vessel Length And Gear Restriction Zones” are set by the state and there are some areas closed to non-pelagic trawling (5 AAC 39.164 (4)-(7)). Parallel fisheries occur for Pacific cod, walleye pollock *Theragra chalcogramma*, Atka mackerel *Pleurogrammus monopterygius*, Pacific ocean perch, red rockfish (shortraker, rougheye, sharpchin and northern rockfish), Greenland turbot *Reinhardtius hippoglossoides*, arrowtooth flounder *Atheresthes stomias*, flathead sole *Hippoglossoides elassodon*, yellowfin sole *Pleuronectes asper*, rock sole *P. bilineatus*, an aggregated rockfish species complex, and an aggregated flatfish species complex. Although these fisheries take place primarily in federal waters of the EEZ, some of the harvest occurs in waters under the jurisdiction of the State of Alaska. The term “discarded” in the following discussion refers to harvested fish discarded at sea or at the dock; utilized fish are those retained for any product (including fish meal), bait, personal use, or by an observer.

Harvest of Pacific cod in the state waters of the BSAI Area during 2002 was 8.7 million pounds taken by 96 vessels with most of the harvest by trawl vessels (Tables 10 & 11). The overall number of vessels and deliveries has decreased since 1995, probably due in part to Stellar sea lion no fishing and no transit areas in the Aleutians. Harvest of Pacific cod was predominately from the waters south of Cape Sarichef. Virtually all of the Pacific cod harvested was utilized. The 2002 harvest was below the previous seven-year (1995-2001) average harvest of 14 million pounds.

Walleye pollock harvest in the state waters of the BSAI Area in 2002 was 11.2 million pounds and was taken by 31 vessels (Table 10). Walleye pollock harvest was primarily in directed fisheries with over 99% of the harvest taken by trawl vessels (Table 11). Virtually all of the pollock harvested was utilized. The harvest of walleye pollock from 1995 to 1998 and in 2002 was predominantly from the waters of the Bering Sea District.

Atka mackerel harvest in state waters around the Aleutian Islands in 2002 was 23,000 pounds, considerably less than in 2001. This could be due in part to new fishing regulations that were put in place to protect Stellar sea lions. All harvest of Atka mackerel occurred in waters south of the latitude of Cape Sarichef and was harvested by trawl gear (Table 11). Most of the harvest was incidental to other fisheries, and only 8% of the harvest was utilized.

There are 34 species of rockfish in Alaskan waters, of which 13 occur in the BSAI Area (Kramer and O’Connell, 1988). For management purposes these species are put into five groups. Pacific ocean perch is one group; in the Aleutian Islands, shortraker and rougheye rockfish are considered as a group, while sharpchin and northern rockfish form another group. In the Bering Sea shortraker, rougheye, sharpchin and northern rockfish are combined to form the “other red rockfish” group. All remaining rockfish species comprise the “other rockfish” group.

Harvest of Pacific ocean perch from state waters during 2002 occurred entirely in the Aleutian Islands District. Fourteen vessels harvested 5,400 pounds from state waters (Table 10). All

harvest was incidental to other fisheries, 63% of which was discarded at sea or at shore prior to being processed, and the remainder was processed as fishmeal. Trawl vessels accounted for all of the harvest (Table 11).

Ten vessels harvested 1,070 pounds of shorttraker and rougheye rockfish in state waters during 2002, harvested primarily with longline gear (Tables 10 & 11). This harvest is much lower than the previous seven-year average of 10,000 pounds. All harvest was in the Aleutian Islands District and was incidental harvest to other fisheries. Nineteen percent of the harvest was utilized.

Eleven vessels harvested 6,400 pounds of sharpchin and northern rockfish in 2002, which totals approximately half the harvest in 2001, and is below the previous seven-year average of 18,000 pounds. Trawl vessels took over 99% percent of the harvest and longline vessels (Tables 10 & 11) took the remainder. All harvest was in the Aleutian Islands District. Over 98% of this harvest was discarded.

Harvest of the “other” rockfish group has varied over the last seven years. Although the number of vessels remained relatively constant, the number of deliveries has not. Thirty-seven vessels harvested 53,000 pounds in state-waters during 2002 (Table 10), all of which was caught in the Aleutian Islands District. Over 99% of the harvest was taken by longline vessels incidental to other fisheries (Table 11). Ninety-eight percent taken from state waters was utilized. Harvest included the following species of rockfish: dusky, yelloweye *S. ruberrimus* and thornyhead rockfish *Sebastolobus* spp. Thornyhead rockfish accounted for 98% of the rockfish harvested in this group in 2002. Redbanded *Sebastes babcocki*, and darkblotched *S. crameri* rockfish were also harvested in this area from 1995 through 1999. ADF&G fish ticket database also contains records of harvest for yellowmouth *Sebastes reedi*, greenstripe *S. elongatus*, rosethorn *S. helvomaculatus*, tiger *S. nigrocinctus* and copper *S. caurinus* rockfish although their occurrence in the BSAI Area is questionable, and could have been misidentified at the dock.

There are 30 species of flatfish in Alaskan waters, 26 of which occur in the BSAI Area (Kramer, et. al., 1995). For management purposes these species are split into five fisheries. There are fisheries for Greenland turbot, yellowfin sole, rock sole, and flathead sole. All remaining flatfish species are harvested in a fishery for the species complex called “other flatfish”.

The 2002 state-waters harvest of Greenland turbot from the BSAI Area was entirely from the Aleutian Islands District. Seventeen vessels harvested 43,372 pounds, primarily with longline gear (Tables 11 & 12). Approximately eighty-eight percent of the harvest was utilized. The harvest of Greenland turbot in state waters has varied in recent years. While virtually all of the harvest occurred during the directed fishing season, most fishing effort was in conjunction with the Pacific halibut and sablefish fisheries.

State-waters harvest of arrowtooth flounder in 2002 was 33,868 pounds taken by thirty-eight vessels, primarily trawl vessels (Tables 11 & 12). All harvest was incidental to other fisheries, and only 46% of the harvest was utilized. Ninety-eight percent of the harvest was from Aleutian Islands waters south of the latitude of Cape Sarichef.

Nineteen vessels harvested 144,293 pounds of rock sole in 2002 (Table 11 & 12). Trawl vessels harvested 100% of the rock sole; of which only 3% was utilized, primarily as fishmeal (Table

11). Approximately 61% of the rock sole harvest occurred on the north side of the Alaska Peninsula, and the remainder was harvested from the waters of the Aleutian Islands.

State-waters harvest of yellowfin sole in 2002 was 27,144 pounds taken by four vessels by trawl gear (Tables 11 & 12). All harvest was incidental to other fisheries and over 99% was discarded at sea. Almost all of the harvest came from the Bering Sea District.

Twenty-eight vessels harvested 68,525 pounds of flathead sole in 2002, by trawl gear (Tables 11 & 12). Most of the harvest, which occurred incidental to other fisheries, came from the Bering Sea District. Only 13% of the harvest in 2001 was utilized, all of which was processed into fishmeal.

Harvest of fish in the “other flatfish” group has varied greatly from 1995 through 2002. In 2002 eighteen vessels harvested 5,504 pounds (Table 11 & 12), of which 50% came from waters south of Cape Sarichef. All harvest was incidental to other fisheries, and 43% of the harvest was utilized, all of which was processed into fishmeal. Harvest included rex sole *Errex zachirus*, butter sole *Isopsetta isolepsis* and starry flounder *Platichthys stellatus*. In previous years, Dover sole *Microstomus pacificus*, Alaska plaice *Pleuronectes quadrituberculatus*, and English sole *Parophrys vetulus* were also harvested.

Harvest of fish from the state waters of Alaska, during parallel fisheries, from 1995 through 2002 has averaged approximately 27 million pounds per year and totaled more than 216 million pounds. The total harvest for that period included 103 million pounds of walleye pollock, 106 million pounds of Pacific cod, 1.3 million pounds of Atka mackerel, and approximately 778,000 pounds of all rockfish species, including Pacific ocean perch. Greenland turbot harvest during the eight-year period was 1.3 million pounds, arrowtooth flounder was approximately 954,000 pounds and rock sole was approximately 940,000 pounds. The remaining flatfish species harvest totaled just over 777,000 pounds. The harvest of walleye pollock from state waters generally varies according to the available TAC. Pacific cod and other groundfish harvest in state waters is generally independent of the TAC, and is probably due more to species distribution, prey distribution, weather, and other environmental factors.

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Table 1. Aleutian Islands state-waters sablefish fishery GHLS compared to the federal TAC, state-waters harvest, and number of vessels and deliveries, 1995 - 2002.

Year	Federal TAC ^{ab}	State-waters GHL ^a	Harvest ^a	GHL as Percent of Federal TAC	Number of	
					Vessels	Deliveries
1995	8,377,556	400,000	269,220	4.8%	35	59
1996	5,070,626	280,000	401,463	5.5%	35	67
1997	5,070,626	270,000	317,562	5.3%	37	75
1998	5,908,382	270,000	254,578	4.6%	38	101
1999	5,996,566	250,000	279,778	4.2%	24	38
2000	8,598,018	400,000	446,560	4.7%	28	59
2001	8,950,757	425,000	464,241	4.7%	31	99
2002	9,873,920	460,000	477,970	4.7%	24	59

^a In whole pounds.

^b Total allowable catch for the federal Bering Sea-Aleutian Islands Area

Table 2. Harvest in whole pounds by gear type in the Aleutian Islands state-waters sablefish fishery, 1995-2002.

Year	Longline	Trawl	Pot	Total
1995	227,917	41,303	0	269,220
1996	401,429	26	8	401,463
1997	312,506	20	5,036	317,562
1998	252,398	2,180	0	254,578
1999	272,240	6,268	1,270	279,778
2000	446,112	0	448	446,560
2001	439,612	210	24,419	464,241
2002	456,632	1,126	20,212	477,970
Total	2,808,846	51,133	51,393	2,911,372

Table 3. Percent of the fleet, deliveries, and harvest in the Aleutian Islands state-waters sablefish fishery by non-quota and quota vessels, 1995-2002.

Year	Non-quota ^a			Quota ^b		
	Fleet	Deliveries	Harvest	Fleet	Deliveries	Harvest
1995	23%	51%	38%	77%	49%	62%
1996	26%	49%	57%	74%	51%	43%
1997	43%	63%	53%	57%	37%	47%
1998	55%	74%	42%	45%	26%	58%
1999	29%	39%	53%	71%	61%	47%
2000	14%	41%	80%	86%	59%	20%
2001	74%	85%	93%	26%	15%	7%
2002	75%	86%	95%	25%	14%	5%

^a Vessels without federal individual fishing quota or community development quota.

^b Vessels with federal individual fishing quota or community development quota.

Table 4. Economic performance, season length and dates of the Aleutian Islands state-waters sablefish fishery, 1995 - 2002.

Year	Fishery Value	Exvessel Value ^a	Season Length ^b	Season Dates	
				Opened	Closed
1995	\$502,000	\$2.96	245	15-March	15-Nov
1996	\$642,000	\$2.54	133	15-March	26-Jul
1997	\$710,000	\$3.55	127	15-March	20-Jul
1998	\$350,000	\$2.18	245	15-March	15-Nov
1999	\$474,000	\$2.69	154	15-March	16-Aug
2000	\$855,000	\$3.04	122	15-March	15-Jul
2001	\$788,000	\$2.85	85	15-May	8-Aug
2002	\$876,000	\$2.95	63	15-May	16-Jul

^a Per pound dressed weight.

^b In days.

Table 5. Aleutian Islands state-waters black rockfish fishery harvest statistics and economic performance, 1994 – 2002.

Year	Guideline Harvest Level ^a	Number of		Harvest ^a	Exvessel Value ^b	Fishery Value
		Vessels	Deliveries			
1994 ^c	100,000			NO COMMERCIAL HARVEST		
1995 ^c	100,000			CONFIDENTIAL		
1996 ^c	100,000			CONFIDENTIAL		
1997 ^c	100,000	3	18	102,746	\$0.34	\$35,000
1998 ^d	100,000			CONFIDENTIAL		
1999 ^{de}	90,000	8	41	20,889	\$0.35	\$7,200
2000 ^d	90,000			CONFIDENTIAL		
2001 ^d	90,000			CONFIDENTIAL		
2002 ^d	90,000			CONFIDENTIAL		

^a In whole pounds.

^b Per pound whole weight.

^c Totals include black and dusky rockfish. In the early years of the fishery, dusky rockfish may have been misidentified as black rockfish; therefore harvest totals include both species.

^d Black rockfish only.

^e Eight pounds were harvested from the EEZ.

Table 6. Aleutian Islands state-waters black rockfish fishery harvest by section, 1994 – 2002.

Year	Akutan Section		Unalaska Section		Western Section	
	GHL ^a	Harvest	GHL ^a	Harvest	GHL ^a	Harvest
1994 ^b	50,000	0	50,000	0	NA	0
1995 ^b	50,000	0	50,000	Confidential	NA	0
1996 ^b	50,000	0	50,000	Confidential	NA	0
1997 ^b	50,000	Confidential	50,000	Confidential	NA	0
1998 ^c	40,000	Confidential	40,000	0	20,000	0
1999 ^{cd}	35,000	13,465	35,000	Confidential	20,000	Confidential
2000 ^c	35,000	Confidential	35,000	Confidential	20,000	Confidential
2001 ^c	35,000	Confidential	35,000	Confidential	20,000	Confidential
2002 ^c	35,000	Confidential	35,000	Confidential	20,000	Confidential

^a Guideline harvest level in whole pounds.

^b Totals include black and dusky rockfish. In the early years of the fishery, dusky rockfish may have been misidentified as black rockfish; therefore harvest totals include both species.

^c Black rockfish only.

^d Eight pounds were harvested from the EEZ.

NA = Not applicable.

Table 7. Aleutian Islands state-waters black rockfish fishery guideline harvest level (GHL) in whole pounds, by section and subsection for the 2002 fishery.

Section	Subsection	GHL (Pounds)
Akutan	Akutan Island	10,000
	Akun Island	10,000
	Rootok Island	5,600
	Tigalda Island	9,400
	Total:	35,000
Unalaska	Unalaska Bay/Wislow	3,000
	Cape Kalekta/Unalga Island	3,600
	West Unalaska	12,850
	South Unalaska	12,300
	Beaver Inlet/Sedanka Island	3,250
	Total:	35,000
Western	No Subsections	20,000

Table 8. Black rockfish age (from otoliths) and length data, 1997 - 2002.

Year	Sample Size	Age ^a		Length ^b	
		Average	Range	Average	Range
1997	9	17.1	11 to 32	43.9	35 to 49
1998		NO DATA COLLECTED			
1999	92	15.9	8 to 30	45.3	37 to 51
2000	10	8.8	7 to 10	41.0	37 to 45
2001		NO DATA COLLECTED			
2002		DATA NOT YET AVAILABLE			

^a In years.

^b In centimeters.

Table 9. Number of vessels and harvest of Pacific cod and rockfish in the “Adak Vessel Length and Gear Restriction Zone” since its inception 2000-2002.

Year	Zone	Pacific Cod			Rockfish ^a		
		# Vessels	Harvest ^b	Total ^b	# Vessels	Harvest ^b	Total ^b
2000 ^c	1 ^d	6	8,106		2	243	
	2 ^d	4	5,335		2	3,745	
	2 ^e	8	131,528	723,128	6	6,190	10,505
2001	1 ^d	9	184,062		2	433	
	2 ^d	11	1,086,331		4	5,043	
	2 ^e	14	3,427,867	4,698,260	7	32,386	37,862
2002	1 ^d	6	1,006,698		2	944	
	2 ^d	8	4,794,595		2	2,453	
	2 ^e	8	2,603,051	8,404,344	6	6,109	9,506

^a Includes all species of rockfish commercially harvested.

^b In pounds.

^c Harvest occurring after regulations went into effect July 5, 2000. Total includes all harvest by small vessels (less than 60') for the year.

^d Vessels less than or equal to 60'.

^e Vessels greater to 60'.

Table 10. Harvest, number of vessels and deliveries from state waters of Alaska in the parallel seasons for Pacific cod, walleye pollock, Atka mackerel, Pacific ocean perch, shortraker/rougheye rockfish, sharpchin/northern rockfish, and other rockfish fisheries in the Bering Sea–Aleutian Islands Area, 1995-2002.

Year		Pacific Cod	Walleye Pollock	Atka Mackerel	Pacific Ocean Perch	Shortraker Rougheye Rockfish	Sharpchin Northern Rockfish	Other Rockfish
1995	Harvest ^a	20,539,276	28,412,682	440,476	33,883	14,080	2,186	27,125
	Vessels	155	46	36	18	19	5	37
	Deliveries	955	90	83	28	22	7	93
1996	Harvest ^a	18,257,947	21,318,035	103,040	68,784	10,765	57,767	43,896
	Vessels	162	55	13	24	22	9	32
	Deliveries	893	102	21	36	27	11	57
1997	Harvest ^a	4,550,359	18,763,624	17,710	10,532	8,325	0	21,198
	Vessels	108	37	8	17	23	0	32
	Deliveries	368	66	9	21	26	0	57
1998	Harvest ^a	11,939,929	13,547,679	11,276	95,113	5,238	9,658	30,165
	Vessels	111	48	11	22	6	6	36
	Deliveries	374	93	14	36	11	7	102
1999	Harvest ^a	18,340,012	1,509,911	534,477	38,743	11,299	22,257	26,007
	Vessels	138	24	14	13	9	14	31
	Deliveries	520	40	16	19	14	18	44

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Table 10. (Page 2 of 2)

Year		Pacific Cod	Walleye Pollock	Atka Mackerel	Pacific Ocean Perch	Shortraker Rougheye Rockfish	Sharpchin Northern Rockfish	Other Rockfish
2000	Harvest ^a	15,617,783	3,593,603	170,829	4,672	15,542	23,741	51,590
	Vessels	164	37	17	8	21	16	34
	Deliveries	580	53	25	10	28	25	74
2001	Harvest ^a	8,732,444	5,497,150	50,893	5,646	8,079	11,583	55,169
	Vessels	112	37	16	8	22	7	42
	Deliveries	288	50	22	10	35	8	109
2002	Harvest ^a	8,699,963	11,237,328	22,795	5,403	1,070	6,452	52,789
	Vessels	96	31	16	14	10	11	37
	Deliveries	265	54	30	19	14	16	79

^a In whole pounds

Table 11. Harvest in whole pounds by gear type from state waters of Alaska in the parallel seasons for Pacific cod, walleye pollock, Atka mackerel, Pacific ocean perch, shortraker/rougheye rockfish, sharpchin/northern rockfish, other rockfish, Greenland turbot, arrowtooth flounder, rock sole, yellowfin sole, flathead sole, and other flatfish fisheries in the Bering Sea-Aleutian Islands Area, 1995-2002.

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
Pacific Cod						
	1995	12,265,060	2,003,742	5,496,569	769,828	4,077
	1996	5,857,109	446,532	11,546,495	393,159	14,652
	1997	814,481	1,476,499	2,048,986	208,215	2,178
	1998	3,975,800	4,128,820	3,624,994	209,937	379
	1999	8,995,797	1,447,771	7,542,991	353,454	0
	2000	5,378,628	3,612,076	6,524,176	102,063	840
	2001	3,819,442	3,879,698	918,731	114,572	0
	2002	7,399,379	452,205	584,781	263,271	0
Pollock						
	1995	28,411,848	15	171	648	0
	1996	21,220,981	0	97,055	0	0
	1997	18,736,861	3	24,595	2,165	0
	1998	13,540,291	6,114	1,274	0	0
	1999	1,508,674	918	319	0	0
	2000	3,583,310	5,339	4,954	0	0
	2001	5,469,771	27,247	132	0	0
	2002	11,237,311	6	1	10	0
Atka Mackerel						
	1995	434,834	2	4,447	1,193	0
	1996	102,296	0	744	0	0
	1997	17,664	3	43	0	0
	1998	11,161	0	115	0	0
	1999	533,652	675	150	0	0
	2000	164,118	5,930	781	0	0
	2001	45,124	5,058	711	0	0
	2002	22,795	0	0	0	0

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Table 11. (Page 2 of 4)

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
Pacific ocean perch						
	1995	33,728	0	93	62	0
	1996	68,784	0	0	0	0
	1997	6,838	0	3,694	0	0
	1998	95,113	0	0	0	0
	1999	37,838	9	896	0	0
	2000	4,290	382	0	0	0
	2001	5,646	0	0	0	0
	2002	5,403	0	0	0	0
Shortraker-Rougheye Rockfish						
	1995	241	13,645	0	194	0
	1996	519	10,246	0	0	0
	1997	1,078	7,247	0	0	0
	1998	1,732	3,506	0	0	0
	1999	1,207	10,092	0	0	0
	2000	169	12,976	0	0	0
	2001	0	8,020	59	0	0
	2002	6	1,064	0	0	0
Sharpchin-Northern Rockfish						
	1995	2,186	0	0	0	0
	1996	57,746	0	21	0	0
	1997	0	0	0	0	0
	1998	9,658	0	0	0	0
	1999	21,811	184	262	0	0
	2000	16,065	7,592	5	80	0
	2001	7,094	4,489	0	0	0
	2002	6,446	6	0	0	0
Other Rockfish						
	1995	1,376	25,402	20	327	0
	1996	112	43,613	81	90	0
	1997	757	20,115	26	300	0
	1998	4,777	25,230	158	0	0
	1999	9,308	16,518	180	0	0
	2000	1,072	50,409	24	85	0
	2001	1,605	53,281	282	0	0
	2002	401	52,262	0	126	0

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Table 11. (Page 3 of 4)

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
Greenland turbot						
	1995	174,281	111,906	18	4	0
	1996	760	175,618	0	0	0
	1997	1,417	93,250	0	0	0
	1998	1,022	338,314	0	0	0
	1999	11,138	74,419	1,051	0	0
	2000	1,523	123,453	5	0	0
	2001	55	145,592	2,177	0	0
	2002	52	42,531	789	0	0
Arrowtooth flounder						
	1995	11,484	9,009	26	283	0
	1996	33,038	1,451	27	0	0
	1997	16,035	4,882	30	0	0
	1998	30,340	832	0	0	0
	1999	749,169	3,457	0	0	0
	2000	11,520	14,905	85	0	0
	2001	13,130	17,968	2,797	0	0
	2002	32,070	1,681	97	20	0
Rock sole						
	1995	52,460	0	110	0	0
	1996	121,696	0	12	0	0
	1997	63,863	0	50	0	0
	1998	135,519	0	17	0	0
	1999	210,956	0	271	0	0
	2000	94,228	1	24	0	0
	2001	117,098	17	0	0	0
	2002	144,293	0	0	0	0
Yellowfin sole						
	1995	170	0	2,887	0	0
	1996	87,333	0	669	0	0
	1997	10	0	83	0	0
	1998	9,694	0	77	0	0
	1999	55,521	3	1,164	0	0
	2000	452	636	38	0	0
	2001	61,307	0	4	0	0
	2002	27,144	0	0	0	0

-Continued-

Table 11. (Page 4 of 4)

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
Flathead sole						
	1995	2,064	0	55	0	0
	1996	70,285	0	5	0	0
	1997	27,332	0	0	0	0
	1998	39,119	0	2,768	0	0
	1999	77,466	431	300	0	0
	2000	10,895	240	81	0	0
	2001	20,836	746	6	0	0
	2002	68,525	0	0	0	0
Other flatfish						
	1995	854	0	357	0	0
	1996	39,658	10	2	0	0
	1997	30,836	0	81	0	0
	1998	59,618	5	1,017	0	0
	1999	46,405	0	0	0	0
	2000	3,011	1	40	0	0
	2001	21,175	0	0	0	0
	2002	5,504	0	0	0	0

Table 12. Harvest, number of vessels and deliveries from state waters of Alaska in the parallel seasons for Greenland turbot, arrowtooth flounder, rock sole, yellowfin sole, flathead sole, and other flatfish fisheries in the Bering Sea-Aleutian Islands Area, 1995 - 2002.

Year		Greenland Turbot	Arrowtooth Flounder	Rock Sole	Yellowfin Sole	Flathead Sole	Other Flatfish
1995	Harvest ^a	286,209	20,802	52,570	3,057	2,119	1,211
	Vessels	24	31	12	7	10	10
	Deliveries	40	60	23	14	17	18
1996	Harvest ^a	176,378	34,516	121,708	88,002	70,290	39,670
	Vessels	33	30	24	17	22	26
	Deliveries	49	42	40	24	36	37
1997	Harvest ^a	94,667	20,947	63,913	93	27,332	30,917
	Vessels	25	18	12	5	9	12
	Deliveries	46	29	21	7	20	27
1998	Harvest ^a	339,336	31,172	135,536	9,771	41,887	60,640
	Vessels	26	17	25	13	19	30
	Deliveries	81	31	47	15	37	53
1999	Harvest ^a	86,608	752,627	211,227	56,688	78,197	46,646
	Vessels	17	19	20	9	13	13
	Deliveries	30	34	42	12	28	17

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Table 12. (Page 2 of 2)

Year		Greenland Turbot	Arrowtooth Flounder	Rock Sole	Yellowfin Sole	Flathead Sole	Other Flatfish
2000	Harvest ^a	124,981	26,510	94,254	1,126	11,216	3,052
	Vessels	21	28	24	5	20	10
	Deliveries	41	44	45	5	26	11
2001	Harvest ^a	147,825	33,894	117,115	61,311	22,219	21,175
	Vessels	32	39	18	8	21	12
	Deliveries	72	61	25	11	27	16
2002	Harvest ^a	43,372	33,868	144,293	27,144	68,525	5,504
	Vessels	17	38	19	4	28	18
	Deliveries	40	74	41	5	41	24

^a In whole pounds.

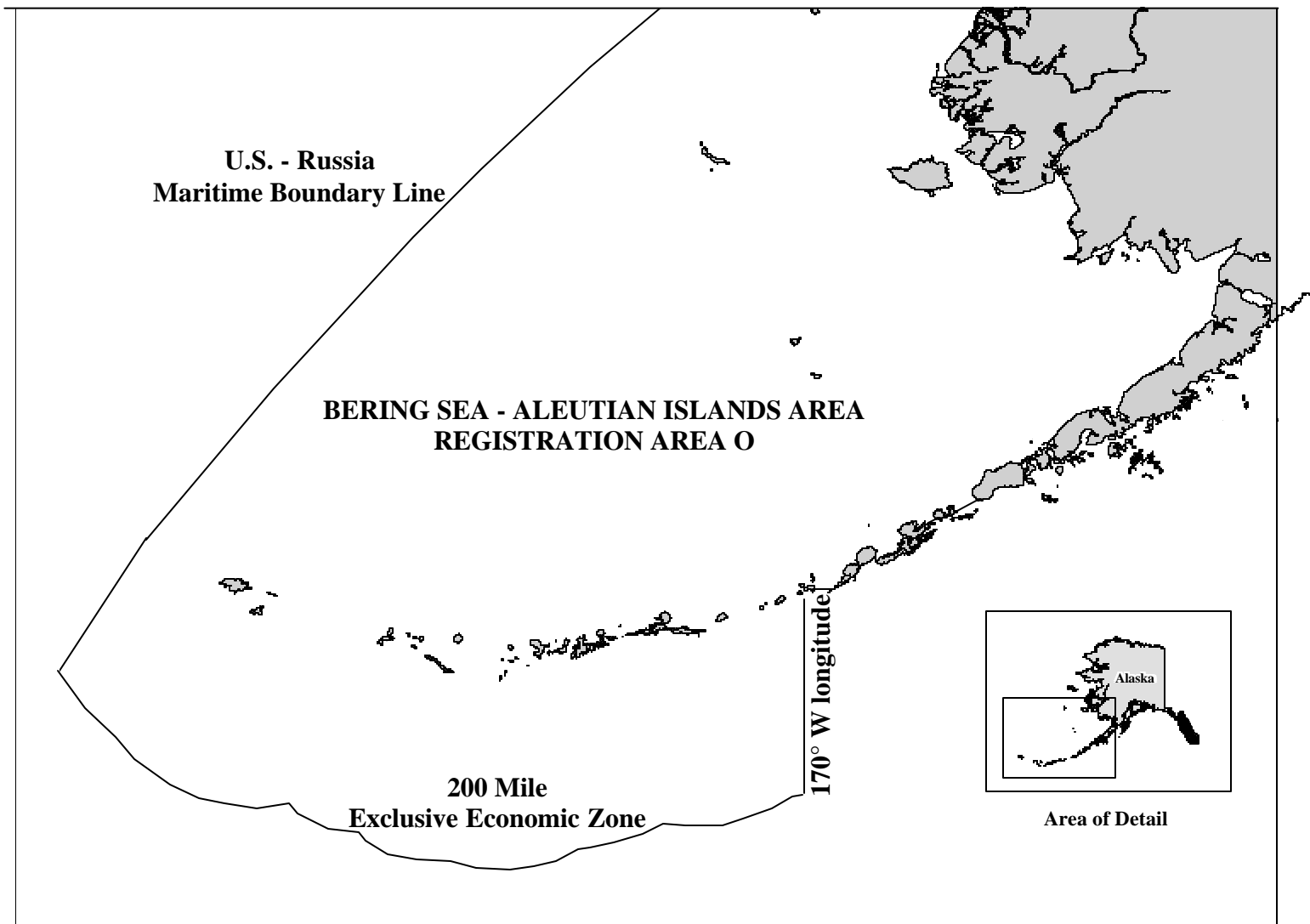


Figure 1. The Bering Sea – Aleutian Islands Area for groundfish management.

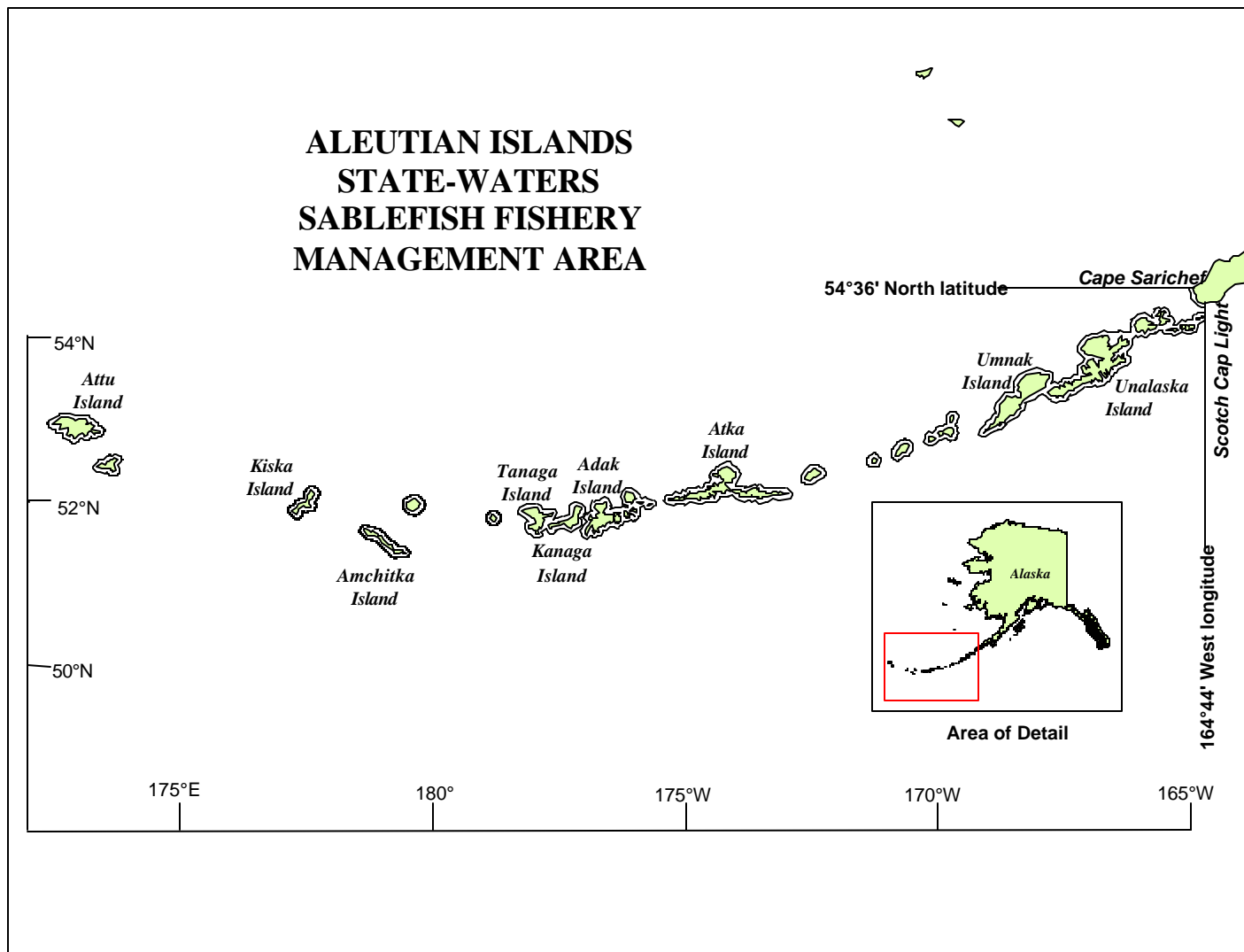


Figure 2. The Aleutian Islands state-waters sablefish fishery management area.

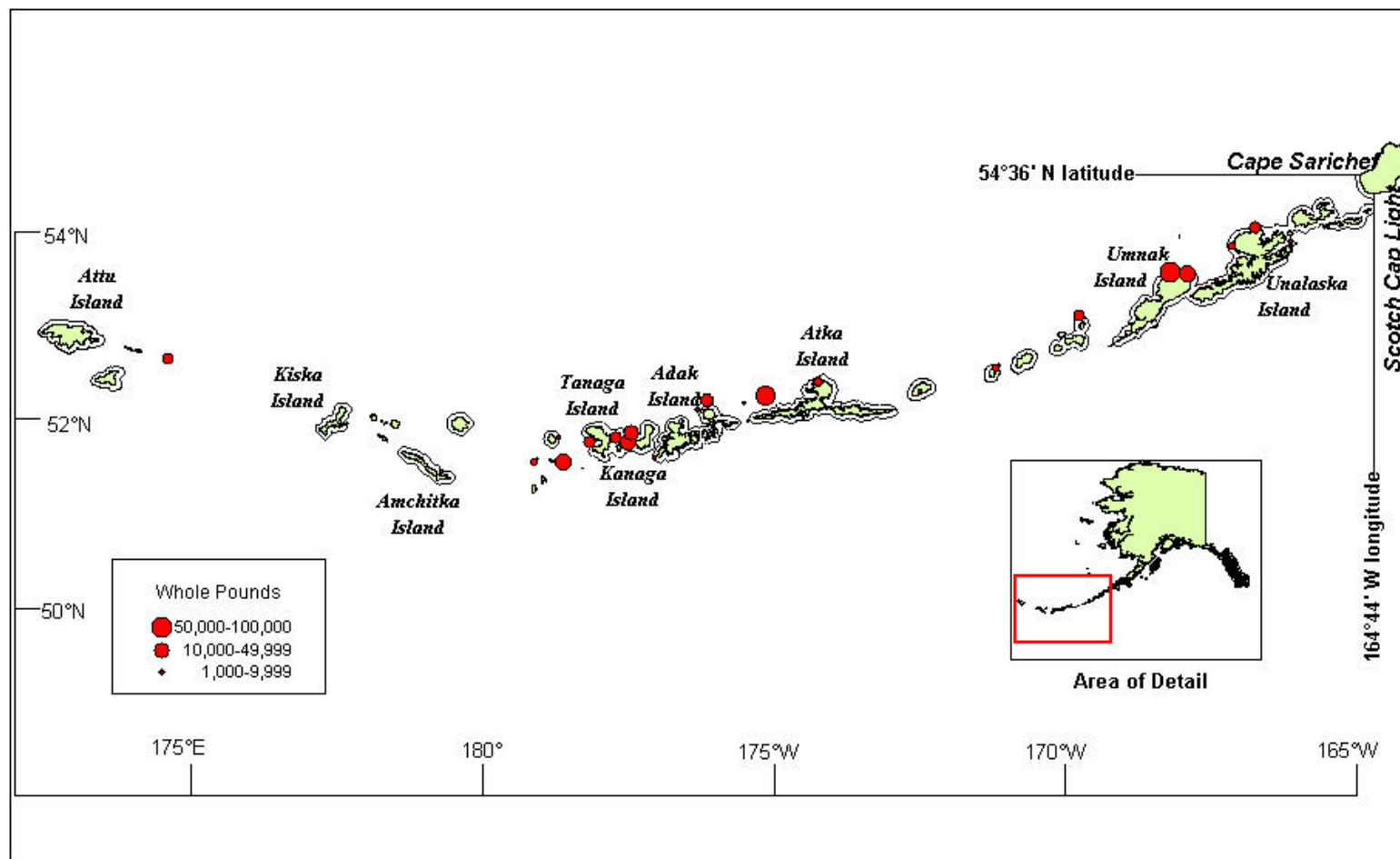


Figure 3. Harvest of Aleutian Islands state-waters sablefish in 2002 showing statistical areas where harvest over 1,000 pounds occurred.

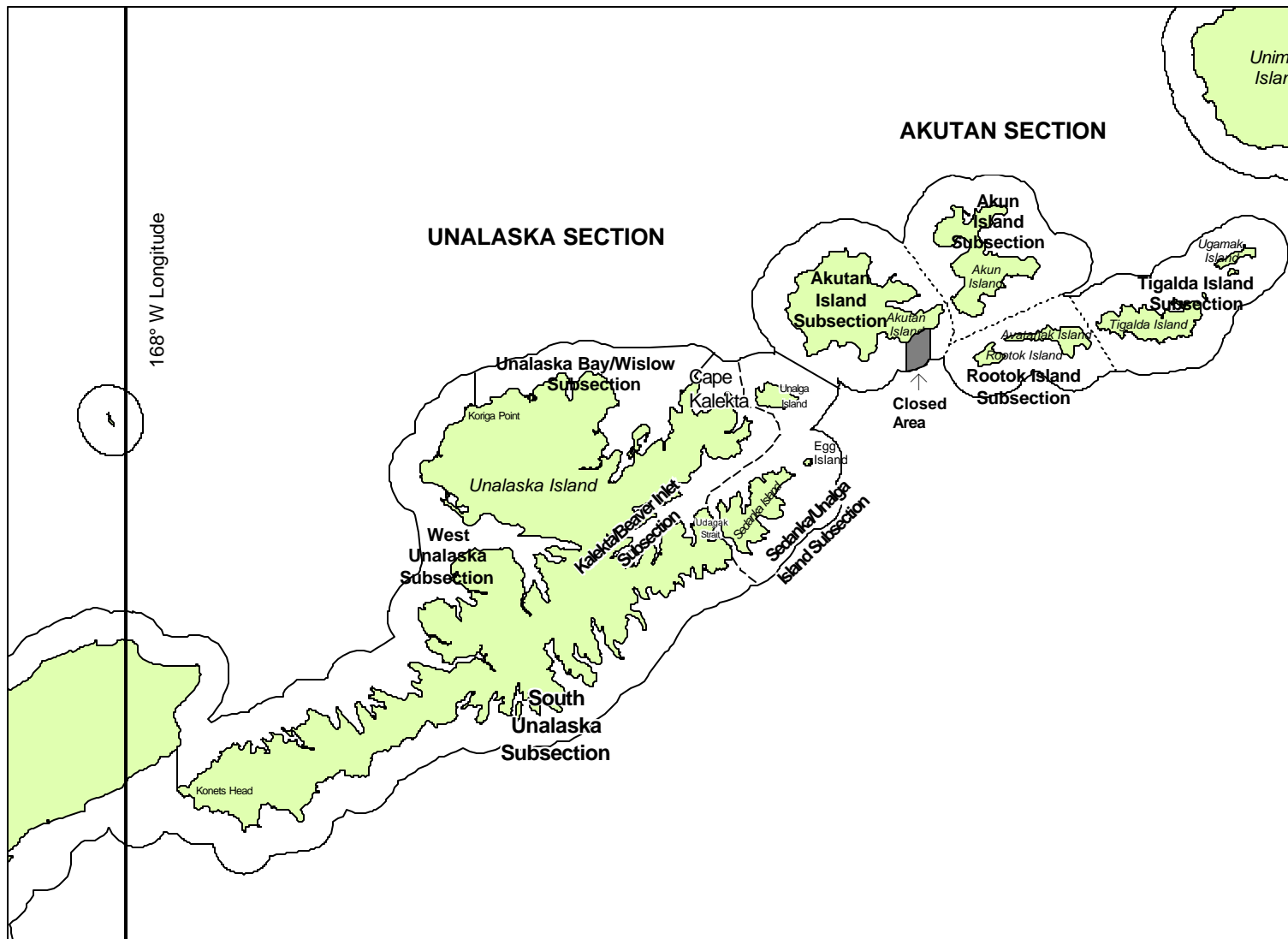


Figure 4. Subsections of the Unalaska and Akutan Sections of the 2002 Aleutian Islands state-waters black rockfish fishery.

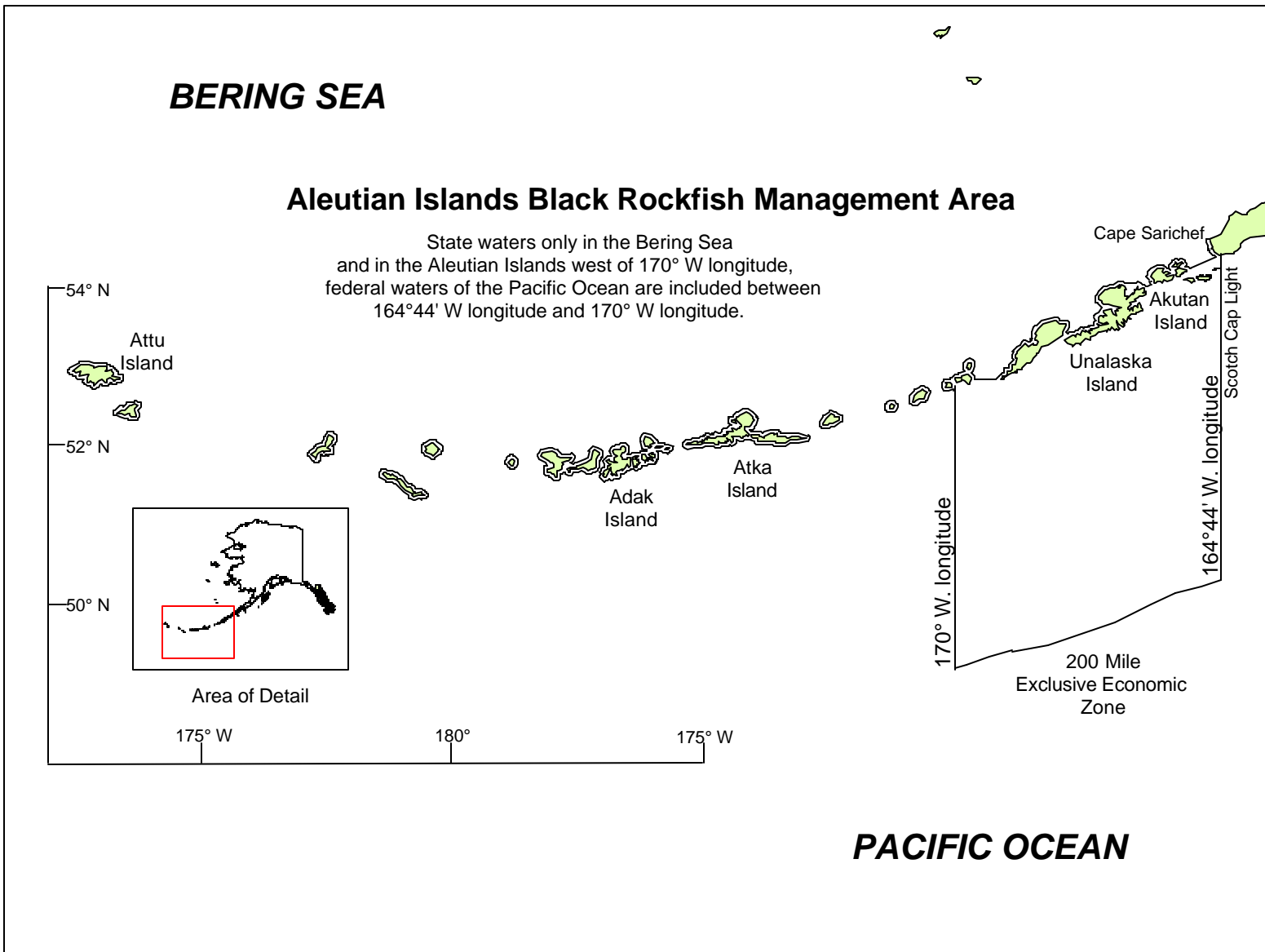


Figure 5. The Aleutian Islands state-waters black rockfish management area.

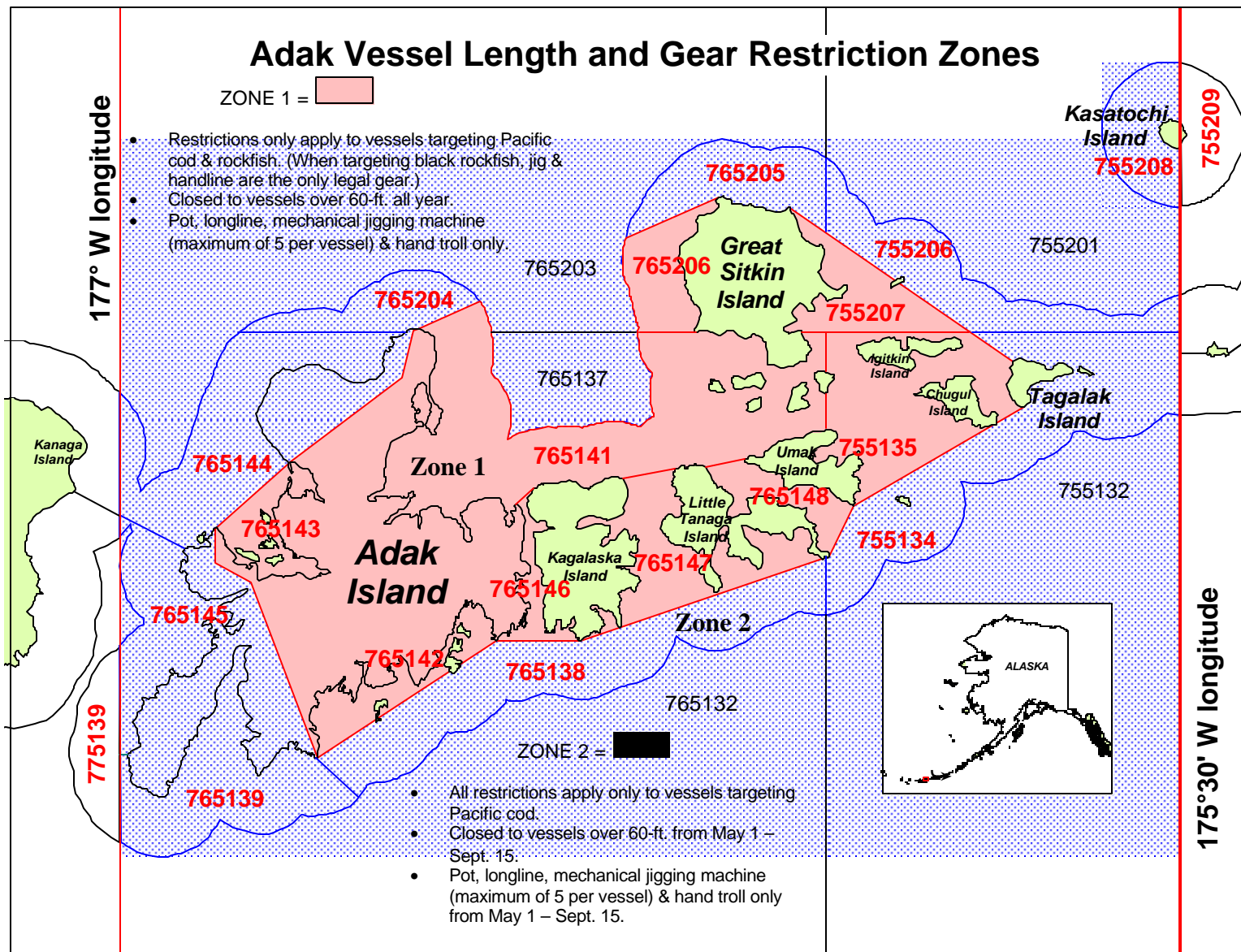


Figure 6. Adak vessel length and gear restriction zones and statistical reporting areas.

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